

Beyond the obvious:

Tensions and volitions surrounding the contributions of universities to regional development and innovationⁱ

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ABSTRACT

There is a general tendency, amongst policy and certain academic circles, to assume that universities are simple strategic actors capable and willing to respond to a well-articulated set of regional demands. In reality, however, universities are extremely complex organizations that operate in highly institutionalized environments and are susceptible to regulative shifts, resource dependencies and fluctuations in student numbers. Understanding universities' contributions – and capacities to contribute - to regional development and innovation requires understanding these internal dynamics and how they interact with external environmental agents. Based on a comparative study across various national settings and regional contexts, the chapter highlights the types of tensions and volitions that universities face while attempting to fulfil their 'third mission'. Building upon the existing literature and novel empirical insights, the chapter advances a new conceptual model for opening the 'black-box' of the university-region interface and disentangling the impacts of purposive, political efforts to change universities' internal fabric and to institutionalize the regional mission..

Keywords: Universities, regional development, innovation, third mission, academic engagement, organisational change and adaptation, tensions and volitions, institutionalisation, university-regional interactions, higher education, regions, external engagement, knowledge transfers, strategic alignment.

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INTRODUCTION

There is currently an increasing global expectation that universities should be involved in territorial development processes for the benefit of both their immediate locality but also their wider national contexts. Universities located in peripheral regions may face additional practical pressure arising from the fact that there are few other substantial innovative actors (see Fontes & Coombs, 2001; Tödtling & Tripl, 2005), and so policy-makers rely heavily on the leadership role of universities in addressing regional needs (Uyarra, 2010; Zahra & George, 2002). Universities contribute to the broader development of their regional surroundings through a variety of means: by attracting (and retaining) talented individuals; by providing graduates with skills and competencies required for (local and national) labour markets; by undertaking cutting edge research, basic and applied, that spills to the outside through technology transfer or strategic alliances; through the direct involvement of academics with the public and private sectors, broad community engagement, and by working with regional policy-makers to improve the aggregate benefits of their spill-over impacts (Gunasekara, 2006).

In spite of a vast body of literature shedding light on the role of universities in regional development (for recent reviews consult, Arbo & Benneworth, 2007; Goldstein, 2009; R. Pinheiro, 2012a), remarkably little attention has been paid to the tensions and volitions between processes of regional engagement which we here characterise as taking place at three scales within the region:

- the *macro* scale, covering the regional territory and its coherent units such as political and policy bodies;
- the *meso* scale, covering the institutional level of actors within strategic business and governance networks (such as universities, local authorities, firms, and intermediary organisations);
- and the *micro* scale, covering the individuals who actually interact and exchange knowledge without necessarily being fully embedded within institutions/regions.

Given this complexity, there are circumstances when it can make sense to conceptualise universities as purely meso-scale (strategic) institutions, capable of efficiently responding to a relatively well articulated set of external demands and expectations by various (national and regional) constituencies. However, what began as a conceptual simplification to deal with regional complexity has become reified as a reality, and there can be assumptions that securing better regional development outcomes from university-regional interaction is simply a question of better integrating academic structures with regional strategies. This, we argue, reflects a more general tendency to overlook three key factors shaping university-region interaction and outcomes, namely:

- the inherent complexity associated with the ‘black-box’ of the university and the region;
- the effects accrued to this complexity in processes of regional engagement; and
- the university organisational form loosely coupling formal and informal institutional resources.

This chapter seeks to contribute to answering the research question: *How can we best conceptualise university-regional interaction as a set of parallel evolutionary dynamics between two complex interlinked systems, the ‘university’ and the ‘region’?* To answer this question we draw upon recent empirical evidence emanating from an international comparative study involving 17 social science scholars active within the fields of higher education and regional science studies, and covering contemporaneous developments across (West and Eastern) Europe, South America, Asia, Africa and Oceania (R. Pinheiro, P. Benneworth, & G.A. Jones, 2012c).

The chapter is organized into six distinct sections. Section 2 briefly reviews current literatures on the role of universities in regional development, distinguishing the regional mission as a contingent and emergent property for universities in particular situations from the abstract idea of the third mission as an inescapable social duty for universities. Section 3 reviews a number of core concepts - the notion of universities as open systems; stylized university models; and the shift from institution to instrument and strategic actor— as a foundation for developing and presenting a conceptual model for understanding university-regional interaction. In recognition of the scope of the model, we focus in this chapter specifically on one half of the relationship, and look at how universities as complex institutions are influenced by many different regional development dynamics. Section 4 presents the methodological aspects of the study and its key findings, three sets of tensions that are discussed and empirically illustrated via the individual case studies. Section 5 uses the data findings to propose a new model that explicitly recognizes these inherent tensions and volitions in order to make sense of the complexity inherent to the university-region interface. Drawing on this new model which disaggregates three separate system layers, the operational, the structural and the cultural, the chapter concludes by arguing the need for a new pathway for future research, specifically focusing on the interplay between these layers within universities and within the civil sphere.

THE THIRD MISSION OF REGIONAL DEVELOPMENT AND INNOVATION

Policy and scholarly interest regarding the regional role of universities is not new: arguably the first policy attempt to systematically promote a regional mission for universities emerged in North America in the late 19th century with the US Congress Morrill Acts, creating Land-Grant Colleges across the country. A major mission of these public institutions, later to become fully-fledged universities, was catering for the pressing (immediate and future) socio-economic needs of their home states from whom they received financial and moral support (c.f. Christy & Williamson, 1992). In the UK, the 1890s saw a number of new civic universities created in larger cities sponsored by public and industrial subscription to support local industry (P. Benneworth & Humphrey, 2012). In Europe, the notion that universities should play a more direct role in the further development of their regional surroundings can be traced to the late 1950s, when, in various countries, a number of universities were

established with an explicit 'regional mandate' alongside the traditional (core) functions of teaching and research (see Dahllöf & Selander, 1994; Neave, 1979).

More recently, the rise of a post-industrial, knowledge-based economy (Rooney, Hearn, & Ninan, 2008) and the importance attributed to regional competitiveness (OECD, 2005) has, once again, brought universities to the forefront of scholarly debates and policy initiatives (regional, national and supranational levels) around the role of universities in regional development and innovation (Benneworth & Sanderson, 2009; Charles & Benneworth, 2001; Chatterton & Goddard, 2000; Flanagan, Uyarra & Laranja, 2011; Goddard & Puukka, 2008; Harding, Scott, Laske, & Burtscher, 2007; Lester & Sotarauta, 2007; Mohrman, Shi, Feinblatt, & Chow, 2009; Musial, 2007; Nilsson, 2006; OECD, 2007; Uyarra, 2010). It is common here to make a distinction between two elements of this system, between the university as knowledge producer and other regional actors who exploit and absorb that knowledge (c.f. Cooke, 2005). There has to date been a tendency to assume that effective university-regional interaction depends on successful alignment between universities and regions (Chatterton & Goddard, 2000; Goddard, Robertson, & Vallance, 2012). And whilst there is without doubt a clear rationale for these two systems to interact, we argue that for both conceptual and practical reasons it is dependent on knowledge producers, exploiters and policy-makers finding place-specific alignments of interests to facilitate that interaction (Benneworth, Hospers, Jongbloed, Leiyste, & Zomer, 2011). In the remainder of the chapter, we focus on one element of this system, the university, in order to understand the dynamics of the situations under which regional engagement makes sense for universities.

It is important here to make a distinction between the idea of the 'third mission' and the idea of a specifically 'regional mission' as there are different underlying arguments, rationales and dynamics for each of these missions (Charles & Benneworth, 2001; Laredo, 2007). The 'third mission' is a shorthand used to refer to the contributions that universities (can) make to external actors. This is a high-level argument relating to how universities have a wider set of duties which emerge from the indisputable public privileges they enjoy in various jurisdictions (Barnett, 2000; Deitrick & Soska, 2005). The concept here is of a third 'mission' besides teaching and research to serve external groups (Molas-Gallart, Salter, Patel, Scott, & Duran, 2002) – this can make it tempting to regard the regional mission as a specific form of the third mission. However, the regional mission of higher education is much more contingent and context-dependent than the more general third mission (Perry & May, 2012). For some institutions it is something they are actively funded to do, for others something they were originally founded to do, for others it is part of their informal culture, whilst yet others find it a convenient means of discharging their wider societal duties (Benneworth, Charles, Hodgson, & Humphrey, 2012).

Our central argument here is that this *contingency* and *context-dependency* makes nonsense of the idea of talking in general terms of a ‘regional mission’ for universities, and it is necessary therefore to consider how universities adopt orientations towards their regions (Pinheiro, 2012a). Rather than assume that universities have a strategic interest under which regional engagement falls, we argue that it is instead necessary to try to understand how universities as complex organizations and relatively autonomous institutions (cf. Pinheiro, Benneworth, & Jones, 2012a) decide on their priorities (Jongbloed, Enders, & Salerno, 2008). To do this, we highlight three main features that characterise contemporary universities and which influence the capacities that these universities have for regional engagement. Since universities are ‘open systems’ (Hölttä & Karjalainen, 1997; Scott, 2008), there have been strong homologising pressures leading to ideal types (Beerens, 2010; Mohrman, Ma, & Baker, 2008), and universities have become increasingly instrumental actors (Ramirez, 2010; Whitley, 2008). Together this creates a general ambiguity around the idea of ‘regional mission’ (or the third mission of regional engagement), that is explored in more detail in the following section.

CONCEPTUAL BACKDROP: CHARACTERIZING MODERN UNIVERSITIES

In order to articulate an operational research question that can guide our analysis of the case studies, it is important to review a number of key contextual elements that have a direct bearing on this discussion, as well as exploring core tensions or ambiguities that illuminate the complexity of the university as organization and institution.

The contemporary context for university responses to their regions

An important aspect of the contemporary context is the increasing *openness* of universities to a range of increasingly diverse external influences. There are growing expectations on universities to become more tightly embedded in society (Nowotny, Scott, & Gibbons, 2002), and in the economic (competitive) affairs of regions and nations in particular (Etzkowitz, Webster, Gebhardt, & Terra, 2000; Maassen & Stensaker, 2011), whilst at the same time, the state has withdrawn from directly regulating universities, instead incentivising external co-operations (Maassen, 1996). One consequence of this paradigm shift has clearly affected the internal dynamics or ‘private life’ (Trow, 1970) of universities, now increasingly expected to respond in a well-articulated (i.e. strategic), efficient, and socially-accountable manner to multiple stakeholders’ various and often contradictory demands (Benneworth & Jongbloed, 2010), including the demands of funding agencies (Rip, 2002). Concurrently, universities have found themselves in common with other kinds of organisations expected to function as ‘open-systems’ (Scott, 2008), intrinsically linked to external dynamics and events, and dependent upon support from a constellation of external patrons (Deephouse & Suchman, 2008; Pfeffer & Salancik, 2003). Scholars adopting this (open systems) perspective (Birnbaum, 1988;

Hölttä & Karjalainen, 1997) argue that open systems can drive internal institutional differentiation; given external environmental complexity, different parts of universities are forced to adapt and respond in different ways to the stakeholders and events which are most salient and urgent for them. More openness does not necessarily drive homogenisation, but rather enhanced environmental demands drive internal variety (Ashby, 1957).

The second issue worth referring to is that of *trans-institutional homologization*. The notion that, in essence, universities are open systems (above) implies that environmental dimensions affect, to varying degrees, internal (organizational) dynamics and operations. Institutional scholars have long referred to the concept of ‘organizational field’ (DiMaggio & Powell, 1983) as a means of making sense of the types of external, collective influences (regulative, normative, and cultural-cognitive) affecting organizations operating within a specific sector of the economy (Scott & Christensen, 1995). This brings to the fore the idea of widespread dominant (legitimizing) *models*, *blueprints* or *archetypes* (c.f. Greenwood & Hining, 1993) that, through adoption and/or adaptation (Beck & Walgenbach, 2005), are likely to influence local activities within a given organizational setting.

While investigating the institutionalization of the regional mission of universities, Pinheiro (2012a, b) refers to the importance attributed to *three* stylized models of universities, each with its distinctive characteristics and normative assumptions concerning the role of the university in society/economy. The classic model of the ‘research-intensive university’ puts a premium on scientific excellence and autonomy, with the regional mission conceived as a “necessary evil” as a means of supporting core (teaching and research) activities. The locally-embedded, ‘regional-university’ is particularly responsive to external needs and demands, and conceives of regional development (in its various forms) as a “moral obligation” and core function. Finally, the emerging model of the ‘entrepreneurial-university’ attempts to balance local relevance and global excellence (see Perry & May, 2006) and approaches the regional mission as a “strategic opportunity” (e.g. access to new resource pools) capable of enhancing its institutional- and market- profiles (competitiveness), regionally, nationally and internationally.

Universities are increasingly encouraged to adopt *strategic management orientations*. Given their long historical pedigree (c.f. Ridder-Symoens, 2003), universities, particularly research-intensive ones, have traditionally been conceived as autonomous entities relatively resilient to external dynamics and demands (Olsen, 2007). This does not mean that they are entirely *de-coupled* (Bastedo, 2007) from societal events, but it does imply that internal actors, particularly academics, have traditionally had a strong say when it comes to the adoption/adaptation of internal structures and core activities (Tapper & Salter, 1992) with inner dynamics best characterized around the notion of a “rule-governed community of scholars” (Nybohm, 2007) responsible for their own destinies. This also meant that, as organizations, ‘classic’ (mostly research-intensive) universities have traditionally been

characterized as possessing a “life of their own” (Selznick, 1996), which, *inter alia*, denoted them with a distinctive sense of organizational identity or “character” (Clark, 1992) which, in a handful of cases is intrinsically linked with a rather prestigious standing within the organizational field of higher education, nationally and internationally (c.f. Palfreyman & Tapper, 2008).

In Europe, and against the backdrop of major economic challenges facing the continent (Maassen & Stensaker, 2011), there have been a series of recent reform efforts, both externally (state) and internally (central administration) led, with the ultimate goal of “modernizing universities” and changing the existing *status-quo* (Pinheiro & Stensaker, 2013). Such developments can be interpreted as ongoing attempts at *de-institutionalizing* (Oliver, 1992) traditional academic- structures and postures associated with the classic model of the (research-intensive) university, replacing them instead (*re-institutionalization*) with more efficient and effective ways of organizing internal activities (Olsen, 2010), including, but not limited to, a tighter *coupling* (Orton & Weick, 1990) amongst different functions and activities, as well as a better integration (*bridging*) between universities and their environments. These on-going dynamics reflect a notion or ‘vision’ (Olsen, 2007) of the university in which it is no longer conceived as a relatively autonomous community of scholars in charge of their own affairs, but instead as a ‘tool’ or ‘instrument’ given strategic autonomy to best achieve the goals and agendas of certain salient (internal and external) stakeholders (Maassen & Olsen, 2007). This process is intrinsically associated with the (re-)construction of a discourse of universities as internally coherent, predictable, and singularly rational *strategic actors* (Ramirez, 2010; Whitley, 2008) assumed to be better capable of clearly articulating singular strategic agendas, internal goals and aspirations, and responding efficiently to emerging environmental circumstances.

The ambiguity of the strategic university

It is clear here that there are potential tensions between universities as open institutions with increasing diversity to respond to external stakeholders, and universities as strategically managed institutions that produce singular calculated responses to environmental pressures. The inherent complexity associated with the university both as an *organization* designed to achieve certain ends (Ramirez, 2010) as well as a fiduciary *institution*, i.e. a set of organized practices embedded in structures of meaning and resources enabling and/or constraining the behaviours of individual actors (Olsen, 2007, p. 27), can be described around *five* distinct but nonetheless interrelated ambiguities, namely, of intention, understanding, history, structure, and meaning (consult Pinheiro, 2012a, 2012b; Pinheiro et al., 2012c).

Ambiguity of intention refers to the idea that universities are often conceived as having multiple functions and relatively ill-defined goals (Kerr, 2001) some of which are at odds with one another (Castells, 2001). For example, Burton Clark (1983, p. 19) famously stated that, within higher

education systems “[G]oals are so broad and ambiguous that the university or system is left no chance to accomplish the goals – or to fail to accomplish them.”

Ambiguity of understanding arises from universities’ basic *technologies*, namely teaching and research, being unclear, uncertain and heavily dependent on the actions of third parties for the production of outcomes (Musselin, 2007). This is particularly the case for outcomes resulting from research endeavours, both in terms of their impact on knowledge structures/science in general (Drori, 2003) as well as their ramifications for society as a whole (Nowotny et al., 2002), including local and national developmental processes (Arbo & Benneworth, 2007; Cloete, Bailey, Pillay, Bunting, & Maassen, 2011).

Ambiguity of history is associated with the importance attributed to path-dependencies (Krücken, 2003). As previously alluded to, the university is an ancient institution tracing its roots back to medieval times (Ridder-Symoens, 2003). The idea has been continually evolving in response to societal pressures, including those associated with large scale shifts towards urban, mercantile, commercial, technical, capitalist and democratic societies (see table below). Seminal studies have shown that universities are deeply embedded in distinct national systems (Clark, 1983) which not only have evolved over relatively long periods of time, but are themselves characterized by their remarkable stability or *inertia* (Frank & Gabler, 2006).

Table 1: Universities between autonomy and dependency – a historical perspective

Social change	Sponsor urgent desire	‘Idea’ of a university
Agricultural revolution	Reproducing religious administrators	Cloister (11th C Italy)
Emergence of nobility	Educating loyal administrators for courtly life	Free cloister (12th C France)
Urbanisation	Educated administrative elite to manage trade	Catholic University of Leuven (15th C)
Sustaining national communities	Validating the state by imagining the nation	Newman’s idea (from 17 th C onwards)
Creating technical elite	Creating a technical elite alongside the administrative elite	Humboldtian (19th C Germany)
Promoting progress	Creating economically useful knowledge	Land Grant Universities (19th-20th C, USA)
Supporting democracy	Creating elites for non-traditional societal groups	Dutch Catholic Universities (20th C, Netherlands)
Foster innovation and global competitiveness	Tight engagement with industry and the commercialization of knowledge	Stanford & M.I.T. (late 20 th C and early 21st C, USA)

Source: Benneworth (2014)

The fourth ambiguity is *ambiguity of structure*, emerging from the typical academic organisation around specialized bodies of knowledge (Clark, 1983). When compared to other organizations, universities possess rather weak interdependent units, and can be considered as ‘loosely-coupled’ systems (Birnbaum, 1988). The traditional absence of a central control and command structure led to characterizations of the university as an ‘*organized anarchy*’ (Cohen & March, 1986) with academic professionals enjoying considerable degrees of autonomy exercised around an institutionalized tradition of collegiality (Tapper & Palfreyman, 2010).

Finally, *ambiguity of meaning* is linked with the notion that universities are highly symbolic entities characterized by the prevalence of a variety of (local) sub-cultures and their respective norms, identities, traditions and behavioural postures (Clark, 1983), some of which are endemic to the organization (Clark, 1992; Huisman, Norgård, Rasmussen, & Stensaker, 2002). There is evidence suggesting that amidst periods of unprecedented environmental change, universities that are capable of upholding their distinctive identities and traditional values are more likely to withstand external pressures (Tapper & Palfreyman, 2011), thus reducing the risk of *co-optation* (Selznick, 1966) by external interests and agendas.

Towards an operational research question

In this chapter, we seek to contribute to debates concerning dynamic relationships between universities and their regions by focusing on better understanding how university decision-making operates in response to complex regional environments. Rather than develop an *ex ante* typology of the ways in which these influences might be mediated into university strategic decision-making, our focus is on understanding how particular regional pressures might push an ambiguity in a particular regional context. Our basic argument is that particular regional engagement contexts force a resolution of these ambiguities into a particular institutional form. Our analysis of ambiguity of structure illustrates this by suggesting that during times of less urgency for regional engagement, universities are permitted to settle on more autonomous governance structures which would suggest a pluriform set of approaches across institutions. Conversely, a greater policy urgency for regional engagement would drive top-down strategic approaches homogenised between institutions.

Our operational research question in this chapter is therefore; *how does the ‘university’ as a quintessentially ambiguous institution respond to regional environmental drivers?* Answering this allows the chapter to contribute both to scientific debates about the relationships between universities and their regions as well as in policy debates about appropriate policies for productively optimising these relationships in particular places.

THE STUDY, CASES AND METHODS

The empirical base of the study is drawn from a series of cases (regions and universities) from *Europe* (Norway, Finland, England, Scotland, Poland, Germany and Moldova), *Africa* (South Africa and Cameroon), *South America* (Chile and Brazil), *Asia* (Kazakhstan, Kyrgyz Republic and Tajikistan) and *Oceania* (Australia). Cases were selected through a call for participation for which 23 applications were made (including 2 from the authors themselves); these were reviewed by the authors on the basis of theoretical excellence, a clear regional dimension and the presence of a tension or contradiction. A total of eleven authors or teams proceeded to produce full reports, which appeared as chapters in Pinheiro et al. (2012c). The methods for data collection and analysis varied between cases, from desktop reviews of official documents (national/local government and university levels), to interviews with key actors (policy makers, academics and administrators, and regional actors across public and private sectors). In some cases, researchers also analysed primary and/or secondary data sets from surveys administered to key internal and external actors.

EMPIRICAL FINDINGS

The primary focus of the investigation is the tensions and contradictions surrounding the institutionalization of universities' regional role or mission. The empirical findings suggest tensions at a variety of levels involving a diverse range of stakeholders. Some tensions are internal to the university, whereas others emerge out of the encounter between the university and regional development processes more generally. There are tensions between internal (academics) and external (national and regional) stakeholders, which help determine universities' overall degree of regional engagement. To better synthesise the rich data sets, we categorized the empirical findings around three specific tensions, as derived from:

- Path- and resource-dependencies;
- The role of dominant players/models, legitimacy and symbolic compliance;
- Strategic planning processes.

These tensions are not necessarily mutually exclusive and were found to occur both *within* and *across* individual cases (universities/regions). We provide an illustration of key aspects relating to each tension as identified in the empirical material (for a more detailed analysis consult Pinheiro et al. 2012c).

Path- and resource-dependencies

Historical trajectories were found to play an important role in the institutionalization of the regional mission. Pinheiro (2012b) shows how the establishment (late 50s and early 70s) of universities with an explicit regional mandate in a set of peripheral Nordic regions has had a range of profound effects on the ways academic groups chose to fulfil their regional missions. In Northern Norway, the initial anti-capitalistic attitude, of both junior academic staff as well as student representatives, created natural

barriers to the university's broader engagement with surrounding industries. More positively, in Northern Finland, a series of strategic decisions were taken by Oulu municipality to promote technology development and innovation. This combined with the presence of a number of critical knowledge-based actors (including, sector-based research institute/VTT, headquarters for Nokia mobile phones, and university engineering units), and a regional culture of entrepreneurialism to facilitate the development of a 'joint vision' and articulated 'strategic agenda' (clear roles and responsibilities) amongst regional actors. This process helped relieve internal tensions within the university and tensions between the university and regional actors. More importantly, this contributed to the region becoming Finland's most innovative (Oinas-Kukkonen, Similä, Kerola, Pulli, & Saukkonen, 2005). In South Africa, Pinheiro (2012) demonstrates how the historically close engagement with the previous apartheid-regime created significant cultural barriers (e.g. lack of trust) with respect to the university's willingness to become actively engaged with, and directly contribute towards, the development of, the surrounding (Eastern Cape) region. In all three cases, Pinheiro (2012, p. 51) identified three tensions, namely, the need to find an adequate balance between: (a) *core* and *peripheral* tasks or activities, with these largely seen as complementary rather than mutually exclusive; (b) *local* versus *global* postures and academic aspirations, intrinsically associated with the 'relevance-excellence' nexus (Perry & May, 2006); and (c) the contrasting expectations and strategic agendas between *external stakeholders* as well as between these and those of *internal academic groups* (Clark, 1998).

In Eastern Europe, Kwiek (2012a) demonstrates how the role of universities in regional development (and innovation) in Poland was driven by a dominant 'knowledge-economy discourse' that failed to take into account the continuing divide, regulatory and economic, between 'East' and 'West', as well as factors exogenous to domestic higher education and innovation systems. Kwiek presented empirical evidence of ongoing weak linkages between Polish universities and their external environments, including the *de-coupling* of educational programmes and labour market dynamics. This drove, over time, the institutionalization of an *academic ethos* (see Merton, 1979) characterized by an inward-looking attitude shaped by independent professional norms, values and behavioural postures relatively resilient to external events and stakeholders' interests and demands (Olsen, 2007). In Poland, universities' regional mission was neither separately funded/assessed nor regarded as being distinct from teaching and research. Ongoing attempts at re-institutionalizing the research mission of Polish universities (Kwiek, 2012b) in light of the increasing emphasis in Europe and the 'knowledge-triangle' (Maassen & Stensaker, 2011), have further marginalized the regional mission. External engagement became narrowly defined as finding alternative funding to reduce resource dependencies (from the public purse) and enhancing national/ international competitiveness and market profile.

Further to the East in Europe, Padure (2012) reveals how the regional role of universities in Moldova was overwhelmingly determined by its centralized economic and political system regulating higher

education affairs (a Soviet legacy). This meant that local issues facing universities (within a region) were dealt with centrally by bureaucrats located at national steering and funding agencies. By the mid-1990s, these agencies saw universities primarily as vehicles for national *identity*- and *elite*- formation (Castells, 2001) rather than regional or national development. Restrictions in ‘real’ institutional autonomy (see Schmidtlein & Berdahl, 2005) enjoyed by Moldovan universities also created barriers to local responsiveness (realms of curriculum, research and outreach) to external events and stakeholder demands (Padure, 2012, p. 98).

Wangenge-Ouma and Fongwa (2012) show how, in the broader African context, the historical legacy of national universities, clearly geared towards training the political and economic elites (c.f. Castells, 2001), created significant barriers, both cultural and structural, to successfully institutionalizing universities’ regional missions. This case highlights the classic (and unresolved) tension facing modern higher education between *equity* and *excellence* (Clark, 1983), reflected in the co-existence of elite functions within mass university systems (Palfreyman & Tapper, 2008). Further, Wangenge-Ouma and Fongwa’s account shows how, through the allocation of critical financial resources (Pfeffer & Salancik, 2003), external policy frameworks (e.g. World Bank) exercised a critically important role that resulted in the lack of emergence of the “African developmental university” (Wangenge-Ouma & Fongwa, 2012, p. 59). This international approach of resource constraints (from the mid-80s onwards) forced universities across Africa to survive in an increasingly hostile competitive environment, prioritizing teaching (and student recruitment) over core (e.g. research) and peripheral (regional engagement) tasks.

The role of dominant players/models, legitimacy and symbolic compliance

As previously indicated, universities as public organizations inhabit a highly institutionalized environment composed of formal and informal rules (Olsen, 2007), potentially including rewarding or sanctioning local compliance, whether ‘real’ or ‘symbolic’ (see Meyer & Rowan, 1991), to external demands and expectations. Perry (2012) succinctly illustrates how, in the north west of England, regulative shifts in the governance of science policy were not accompanied by changes in institutions’ cultural-cognitive frames of reference (values), resulting in *inertia*, hence reproducing deeply institutionalized academic postures (see Zucker, 1991). This case demonstrates how a set of powerful agents, mostly representing the region’s large research-intensive universities, were able to convince other actors (national and regional levels) to embrace the notion of regional support (financial and otherwise) towards science rather than the other way around. They did this by shaping dominant (legitimizing) discourses around the role of the university in society/economy (consult Powell & Colyvas, 2008). Despite regional actors acknowledging (albeit privately) that non-research intensive universities and less traditional forms of knowledge production did contribute to regional development, the “world-class” (research-intensive) university emerged as the most celebrated,

stylized university model or organizational *archetype* (Greenwood & Hining, 1993). It achieved dominance by positioning itself as the most legitimate and widely available policy-solution to help tackle the various socio-economic malaises facing the (North-West) region.

Similarly, Garcia and Carlotto (2012) show how, at a large research-intensive university in Brazil, novel structural arrangements for a new campus with a strong engagement agenda directly clashed with deeply institutionalized professional (academic) norms, postures and traditions. Academics found attempts at bypassing traditional structural arrangements like departmental units and collegial forms of decision-making to be rather inappropriate since they viewed themselves to be the true *guardians* of the fiduciary values on which the *institution of academe* is built. This specific case demonstrates the tensions that arise when actors within university systems adopt a logic of outcomes or ‘means-ends rationality’ going against traditional academic norms and ‘appropriate’ (i.e. legitimate) behavioural patterns (March & Olsen, 2006). It also points to the shortcomings associated with ‘top-down’ strategic agency (Whitley, 2008) without prior consultation or consent of the members composing the academic heartland upon whom successful implementation relies (Clark, 1998; Gornitzka, Kogan, & Amaral, 2005).

Continuing in South America, Leihiy and Salazar (2012) provide compelling evidence of tensions associated with path dependencies and cultural-cognitive frames of reference within the (domestic) organizational field of higher education. The story of Chile’s ‘public-regional’ universities highlights tensions emerging from their dual status, as both public and regional, as well as bearers of traditional values like institutional autonomy and academic (scientific) ambitions towards becoming recognized institutions in their own right. The authors shed light on the *advantages* (student recruitment) and *drawbacks* (accountability) associated with the official status as ‘public’ universities. Despite this, public-regionals were found to differ substantially in their strategic orientations towards regional engagement (Greenwood, Raynard, Kodeih, Micelotta, & Lounsbury, 2011; Oliver, 1991) as well as active involvement with regional issues/actors, with some collective (organizational) postures best characterized as *in* the region but not *for* it (Pinheiro, 2012a).

Moving to Asia, Oleksiyenko (2012), in his analysis of the University of Central Asia, illustrates how cross-border regional partnerships involving a variety of stakeholders, some of whom were external to the region/nation, were inherently permeated by tensions around the strategic allocation of resources, knowledge types, contextual differences (e.g. local norms and values), and attempts at (re-)defining specific roles and functions (central and sub-unit levels). On the other hand, and more positively, this rather ambitious cross-national project (three distinct campuses across three countries) also demonstrates the importance of cross-cultural dialogue in mitigating existing tensions around the diverging *values, visions, and perceptions* associated with the historical heritages characterizing each

of the (3) national economies (Kazakhstan, Kyrgyz Republic and Tajikistan) and the demands of their respective local/regional actors.

Tensions derived from strategic planning processes

As previously noted, universities are now expected to respond in an integrated (coherent) and efficient fashion to various external demands. One mechanism by which they accomplish these goals is through increasing *rationalization* (Ramirez, 2010) often resulting in changes (adoption/adaptation) in structural arrangements, internal resource-allocations, and the re-definition of roles and responsibilities (central and sub-unit levels). Yet, such behaviour challenges the status-quo and may create new tensions and contradictions, further augmenting the already rather complex constellations of structures, rules, actors, interests, and sub-cultures that characterize the modern university's internal fabric.

While investigating new structural arrangements geared towards fostering technology transfers within the German city-state of Hamburg, Vorley and Nelles (2012) provide compelling evidence of tensions emerging in attempts to integrate regional technology transfer mechanisms involving no less than four local universities through centralisation. Three sets of tensions undermining processes of institutionalization were identified, namely: (a) the perceived *loss of autonomy* by the universities involved associated with regionalising their technology transfer activities; (b) involved actors scepticism regarding the new centralized structure's *legitimacy* and *independence* as an adequate (trustworthy) intermediary or *broker* amongst universities and regional actors; and (c) the newly devised structural arrangement's *scope* and *purpose* resulted in lack of focus (dilution) and overloading (mission creep).

Benneworth's (2012) account of the relationship between external engagement and universities' core functions across three UK regions (Northern England and Scotland) reveals substantive differences in the ways in which different academic groups, both across and within the (33) case universities, regarded 'community engagement'. Arguably more important was the finding that this role was found to be undertaken on a periodic basis primarily aimed at delivering clear tangible benefits to the universities, irrespective of their impacts in the region. A significant relationship between university archetypes (Greewood & Hining, 1993) and the role of the university in the region was clearly identified (Benneworth, 2012, p. 213). 'Ancient' (research-intensive) universities like Aberdeen or Glasgow were found to have a very limited (instrumental) role in regional development. In contrast, so-called 'rural-network universities' (e.g. Cumbria) were revealed to develop their activities in close proximity to the local community. Despite some of the case universities going to great lengths to promote regional engagement, the study found that: "Although parts of the academic heartland engaging with excluded communities did develop their own norms and cultures, these did not translate through the university more generally to become a shared set of routines, norms and scripts for

engagement” (Benneworth, 2012, p, 216). External engagement became *decoupled* from core internal structures and arrangements (central and sub-unit levels): in none of the cases examined could a real claim be substantiated that there had been a deep institutionalisation of the regional mission into the quotidian routines, norms and scripts of the university community.

Finally, Charles and Wilson (2012) provide an empirical account, from Australia, on how, as a strategic mechanism, *benchmarking* can be used by university managers. They highlighted that in their sample there was a tendency to use this tool to achieve two goals around a regional mission. Firstly, it was used to assess progress with respect to previously defined regional engagement goals. Secondly, it was also used as part of the collective development internal to the university concerning the importance attributed to the successful institutionalization of the third mission. The benchmarking methodology that was employed, and in particular the discursive approach, provided the means for two communities, between whom there are most often clear tensions, the central administration and academic heartland, to come together and have a dynamic and constructive dialogue about how to match strategic orientations with academic aspirations and capacity. The authors argue that benchmarking has the potential for identifying ‘best practices’ across regional contexts, thus stimulating shared learning both within a given region as well as across various national systems.

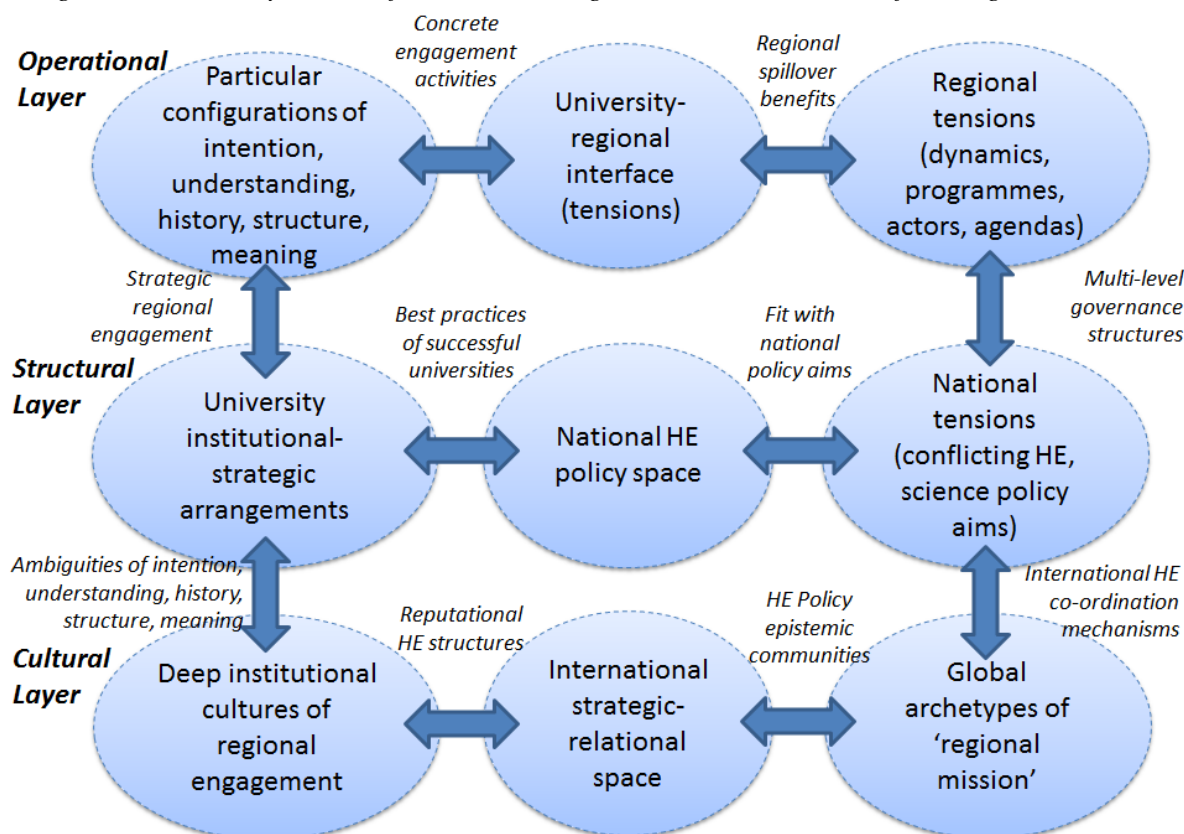
DISCUSSION AND PROPOSING A WAY FORWARD

In this chapter we have sought to address the operational research question “how can we best conceptualise university-regional interaction as a set of parallel evolutionary dynamics between two complex interlinked systems, the ‘university’ and the ‘region’?” The empirical case studies provide further evidence of the university as an ‘open system’ intrinsically linked to environmental dynamics (Birnbaum, 1988; Scott, 2008). Despite increasing evidence of rising ‘instrumentality’ and means ends rationality (Olsen, 2007; Ramirez, 2010), the data clearly supports institutional scholars’ claim that institutional(ized) features (i.e. rules, norms, values, traditions, etc.) *do* shape key local agents’ (academics) behaviours, drastically affecting expected outcomes associated with internal change and transformation processes (Greenwood et al., 2011; Oliver, 1991; see also, Whitley, 2008). Key features emanating from ‘stylized university models’ (Pinheiro, 2012b) or ‘organizational archetypes’ (Greenwood & Hining, 1993) were found to play an important role in processes of *de-institutionalization* and *re-institutionalization* (Oliver, 1992; Olsen, 2010; Kwiek, 2012b), or the lack thereof (Zucker, 1991). The classic, ‘research-intensive university’ was frequently privileged as the most *legitimate* (Deephouse & Suchman, 2008) and *prestigious* (Mohrman et al., 2008) template for organizing university activities; regionally, nationally and internationally. Finally, the adopted conceptual dimensions shedding light on the complexity inherent to the university as a distinct organizational form and relatively autonomous social institution, were found to reflect the various (macro/meso/micro level) tensions, both within the university as well as between internal and external

actors, when it comes to ongoing attempts at institutionalizing the third mission of regional development on the one hand, and at transforming the *Institution of the University* (Olsen, 2007) on the other (see also, Ernste, 2007).

Given the rather compelling empirical evidence presented above and its clear links back into the academic debates highlighted earlier, the question arises of what is the wider significance of these findings? We suggest a new way of conceptualizing the tensions and contradictions associated with the institutionalization of the regional mission (consult Pinheiro et al., 2012b) centred on the ‘university-region interface’ (Chatterton & Goddard, 2000). But rather than limit its consideration to the activities at that interface and the strategies aligning those activities, it instead explores how that activity mediates external pressures into the various layers of the university. The following step of institutionalisation comes through the way these concrete activities produce concrete/ emergent resolutions of the tensions which in turn produce definitive stances on these five areas related to both the actual experiences but also the existing institutional culture. The final step of mediated permeation of external influences into the university comes through the way these ‘definitive stances’ become institutionalised into the informal routines and formal structures of the university. Thus, rather than seeing universities as a flat and easily permeated institution, we highlight the different layers of the university, their differential openness, and their inter-relation (as layers), as factors in influencing the way that external factors change the institution of university. This is shown in figure 1 below.

Figure 1: A multi-layer model for understanding the institutionalization of the Regional Mission



Source: After Pinheiro et al. (2012, p. 250)

The model assumes that the successful accomplishment and sustainability of universities' third missions (of regional development) are intrinsically dependent on the degree of alignment or *coupling* between internal (university) and external (region) structures, activities, and value-laden (normative and cultural-cognitive) systems. It highlights the difficulties that regional missions have in becoming associated with the idea of a university and becoming integrated in the accepted university archetypes which govern the way that university cultures respond to particular policy claims (such as demands for regional engagement). Further, it sheds light on *four* critical factors (pertaining to 'university-regional interface', see above), which, combined, are likely to affect both the *nature* and *level* of university-region interaction on the one hand, as well as the *degree* of institutionalization of universities' regional mandates on the other. The (4) factors are:

- ***Primary activities: Nature, scope and integration***

This comprises three elements. First, the extent to which *teaching*, *research* and *third-stream* (service, outreach, innovation, etc.) activities geared towards the region are aligned with external expectations and the needs (both immediate and future) of various regional actors and that of the region as a whole. Second, the *breadth* (comprehensiveness) and *depth* (specialization) of such arrangements are seen as vitally important. Third, the degree of integration (*coupling*) amongst core (teaching and research) activities, on the one hand, and between these and the peripheral structures and activities, on the other, are also critical factors.

- ***Strategic objectives and aspirations***

This dimension pertains to the degree to which university objectives (central and unit level) and future academic aspirations are aligned (or not) with regional development plans (mid- to long-term visions) and the interests and agendas (short and long-term) of various regional actors.

- ***Normative and cultural-cognitive dimensions***

This refers to the *level of dissonance* between the values, norms, roles and identities of various academic audiences and that of regional actors; a process that is thought to help determine the development of a localized academic posture or *ethos* towards the region as well as that of various regional constituencies towards the university and its perceived role in shaping local development processes.

- ***Resource and incentive systems***

This dimension is intrinsically linked to the *degree of support* (by national and/or regional funding agencies as well as the university's central administration) for active academic engagement with activities that directly contribute to the broader development of the region, either at the level of the

academic core or along the extended developmental periphery (consult Clark 1998 and Pinheiro 2012a).

In a nutshell, the above model is a conceptual illustration of the ways in which tensions associated with the regional role of universities can be assessed, conceptually, and further investigated empirically. The model assumes the potential for a *synergistic effect* between the (4) enabling factors described above and the inner dynamics of both the university and the region, thus, to a certain degree, contributing to the resolution of pending internal tensions associated with the ambiguity inherent to universities and regions alike.

CONCLUSION

This chapter points to a set of important factors affecting processes of internal change and transformation within contemporary universities. These include: historical trajectories or path-dependencies; external control and room for manoeuvre in the form of resource-dependencies and degrees of (institutional) autonomy; the importance of dominant actors, legitimate models or archetypes, and symbolic compliance (e.g. via *decoupling*); and, the increasing prevalence of strategic planning processes aimed at transforming universities into more coherent, predictable and responsive organizational actors. On the basis of the new evidence base, a new model, to be further tested empirically, was presented.

Future research inquiries aimed at addressing existing knowledge gaps could, for example, focus on observable (qualitative and quantitative) variations amongst different (arche-) types of universities; public and private, small and large, old and new, research and non-research intensive, urban vs. rural areas, etc. In addition, scholars interested in cross-national comparisons could look at national systems currently facing similar (institutional and technical) drivers, namely: de-regulation, competition, rationalization, etc. Future studies should also look carefully at the complex and dynamic interplay between environmental drivers and organizational responses following distinct organizational- (outcomes vs. appropriateness) and policy- logics (equity vs. efficiency) as well as local behavioural postures (e.g. real vs. symbolic compliance), including but not restricted to ongoing strategic attempts at (re-)tighten the *coupling* between internal structures and activities, as well as between these and the outside world (both within and beyond the immediate region), in addition to accounting for the effects, if any, accrued to the micro-level dynamics across the sub-units composing the academic heartland.

Finally, policy makers at the local, regional, national and supranational levels should ‘tune-down’ their rather unrealistic (high) expectations with respect to the short-term effects of university activities in regional dynamics (economic revitalization, job creation, innovation systems, absorptive capacity,

etc.). This is not to say that universities cannot aid such important developmental processes, but that, in essence, there are natural limitations to the role they are capable of playing within the context of the multiplicity of functions and publics they aim at serving and, as succinctly espoused above, in light of the inherent ambiguity associated with universities as organizations and institutions on the one hand, and the complexity surrounding the university-region interface on the other.

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